

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) An enclosure for hermetically sealing a microsystem, wherein the microsystem is located on a substrate, the enclosure comprising:
a single-piece cover having walls and a top; and
a solder preform interposed between the single-piece cover and the substrate in order to facilitate creating a hermetically sealed cavity defined by the single-piece cover and the substrate for enclosing the microsystem.
2. (Original) The enclosure as set forth in claim 1, wherein the single-piece cover includes a layer of gold-plating over a layer of nickel-plating.
3. (Original) The enclosure as set forth in claim 2, wherein the layer of gold-plating is approximately at least 0.000075inches in thickness, and the layer of nickel-plating is approximately at least 0.000050inches in thickness.
4. (Original) The enclosure as set forth in claim 1, wherein the solder preform has a thickness of approximately 0.003inches.
5. (Original) The enclosure as set forth in claim 1, wherein the solder preform has a composition of approximately 80% gold and 20% tin.

6. (Original) An enclosure for hermetically sealing a microsystem, the enclosure comprising:

- a substrate whereupon is located the microsystem;
- a single-piece cover having walls and a top; and
- a single solder preform interposed directly between the single-piece cover and the substrate in order to facilitate creating a hermetically sealed cavity defined by the single-piece cover and the substrate for enclosing the microsystem.

7. (Original) The enclosure as set forth in claim 6, wherein the single-piece cover includes a layer of gold-plating over a layer of nickel-plating.

8. (Original) The enclosure as set forth in claim 7, wherein the layer of gold-plating is approximately at least 0.000075inches in thickness, and the layer of nickel-plating is approximately at least 0.000050inches in thickness.

9. (Original) The enclosure as set forth in claim 6, wherein the solder preform has a thickness of approximately 0.003inches.

10. (Original) The enclosure as set forth in claim 6, wherein the solder preform has a composition of approximately 80% gold and 20% tin.

11. (Original) An enclosure for hermetically sealing a microsystem, the enclosure comprising:

- a substrate whereupon is located the microsystem;
- a single-piece cover having walls and a top, wherein the single-piece cover includes a layer of gold-plating that is approximately 0.000075inches in thickness over

a layer of nickel-plating that is approximately 0.000050inches in thickness;
and

a single solder preform having a thickness of approximately 0.003inches and a composition of approximately 80% gold and 20% tin, wherein the solder preform is interposed directly between the single-piece cover and the substrate in order to facilitate creating a hermetically sealed cavity defined by the single-piece cover and the substrate for enclosing the microsystem.

12. (Canceled) A method of hermetically sealing a microsystem, wherein the microsystem is located on a substrate, the method comprising the steps of:

- (a) providing a single-piece cover having walls and a top;
- (b) interposing a single solder preform directly between the single-piece cover and the substrate;
- (c) positioning the single-piece cover and the single solder preform over the microsystem; and
- (d) heating the substrate, the single-piece cover, and the single solder preform in a single step to create a hermetically sealed cavity defined by the single-piece cover and the substrate for enclosing the microsystem.

13. (Canceled) The method as set forth in claim 12, wherein the single-piece cover includes a layer of gold-plating over a layer of nickel-plating.

14. (Canceled) The method as set forth in claim 13, wherein the layer of gold-plating is approximately at least 0.000075inches in thickness, and the layer of nickel-plating is approximately at least 0.000050inches in thickness.

15. (Canceled) The method as set forth in claim 12, wherein the solder preform has a thickness of approximately 0.003inches.

16. (Canceled) The method as set forth in claim 12, wherein the solder preform has a composition of approximately 80% gold and 20% tin.

17. (Canceled) A method of hermetically sealing a microsystem, the method comprising the steps of:

- (a) providing a substrate whereupon is located the microsystem;
- (b) providing a single-piece cover having walls and a top;
- (c) interposing a single solder preform directly between the single-piece cover and the substrate;
- (d) positioning the single-piece cover and the single solder preform over the microsystem; and
- (e) heating the substrate, the single-piece cover, and the single solder preform in a single step to create a hermetically sealed cavity defined by the single-piece cover and the substrate for enclosing the microsystem.

18. (Canceled) The method as set forth in claim 17, wherein the single-piece cover includes a layer of gold-plating over a layer of nickel-plating.

19. (Canceled) The method as set forth in claim 18, wherein the layer of gold-plating is approximately at least 0.000075inches in thickness, and the layer of nickel-plating is approximately at least 0.000050inches in thickness.

20. (Canceled) The method as set forth in claim 17, wherein the solder preform has a thickness of approximately 0.003inches.

21. (Canceled) The method as set forth in claim 17, wherein the solder preform has a composition of approximately 80% gold and 20% tin.

22. (Canceled) A method of hermetically sealing a microsystem, the method comprising the steps of:

- (a) providing a substrate whereupon is located the microsystem;
- (b) providing a single-piece cover having walls and a top, wherein the single-piece cover includes a layer of gold-plating that is approximately at least 0.000075inches in thickness over a layer of nickel-plating that is approximately at least 0.000050inches in thickness;
- (c) interposing a single solder preform having a thickness of approximately 0.003inches and a composition of approximately 80% gold and 20% tin directly between the single-piece cover and the substrate;
- (d) positioning the single-piece cover and the single solder preform over the microsystem; and
- (e) heating the substrate, the single-piece cover, and the single solder preform in a single step to create a hermetically sealed cavity defined by the single-piece cover and the substrate for enclosing the microsystem.